Amendments to the Specification

1) Please insert the following subtitle at page 1, below the title:
Background

2) Please replace the paragraph at page 1, line 35 through and including page 2, line 4 with the following:

The installation in ~~figure~~ Figure 1 is only shown by way of example of one of the numerous possible and existing structures for circulating a cooling gas in a vessel. Conventionally, the pressure is about 4 to 20 bar during the cooling phase. Numerous variants are possible, as regards the disposition of the charge, the gas flow direction, and the method for circulating these gases.

3) Please insert the following subtitle at page 3, line 15:
Summary

4) Please delete the text beginning at page 5, line 37 and ending at page 6, line 11.

5) Please insert the following subtitle and text at page 6, line 11:
Brief Description of the Drawings

For a further understanding of the nature and objects for the present invention, reference should be made to the following detailed description, taken in conjunction with the accompanying drawings, in which like elements are given the same or analogous reference numbers and wherein:

- Figure 1 illustrates, as previously described, an example of a gas quench hardening installation;
- Figure 2A illustrates the convective heat transfer coefficient of a helium gas mixture at differing pressures, in particular, when the mixture is in parallel flow between cylinders;
- Figure 2B illustrates the convective heat transfer coefficient of a hydrogen gas mixture at differing pressures, in particular, when the mixture is in parallel flow between cylinders; and
- Figure 3 illustrates variations in temperature as a function of time for various quenching gases used in similar conditions.

6) Please insert the following subtitle at page 6, after the above-inserted paragraphs:
Description of Preferred Embodiments

7) Please replace the paragraph at page 6, line 34 through and including page 7, line 14 with the following:

According to an embodiment of the present invention, as shown in ~~figures~~ Figures 2A and 2B, it is proposed to use certain gas mixtures as defined above, which further present better convective heat transfer coefficients (kH) in watts per square meter and per Kelvin than each of the gases considered individually. As shown above in fact, according to one advantageous embodiment of the invention, the composition of the cooling gas is adjusted so as to "optimize" the convective heat transfer coefficient in comparison with the convective heat transfer coefficients of each of the components of the cooling gas considered individually. The term "optimization" used here should be understood accordingly as taking place at the peak of the curve concerned, or much lower (for example, for economic reasons) but in any case so as to have a convective heat transfer coefficient that is better than each of the convective heat transfer coefficients of each of the components of the cooling gas considered individually.

8) Please insert the following paragraph at page 10, line 5:

It will be understood that many additional changes in the details, materials, steps and arrangement of parts, which have been herein described in order to explain the nature of the invention, may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims. Thus, the present invention is not intended to be limited to the specific embodiments in the examples given above.

9) Please replace the subtitle at page 11, line 1, with the following text:
~~CLAIMS~~ What is claimed is:

10) Please insert the following subtitle and text to new page 14, line 1:
Abstract of the Disclosure

A method for rapidly cooling metal parts with a pressurized cooling gas mixture. The mixture is made up of at least one infrared absorbing gas and has convective heat transfer properties superior to those of nitrogen in similar usage conditions.